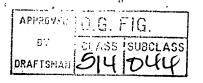
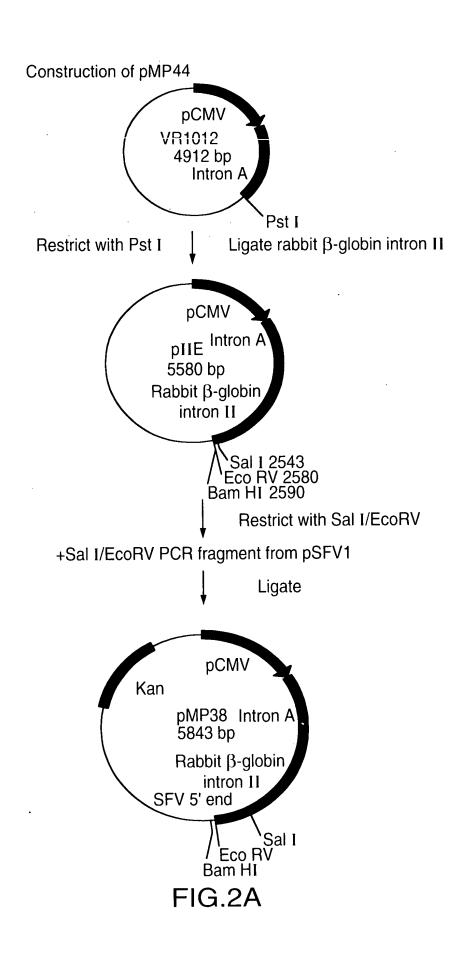
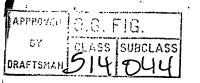


FIG.1B







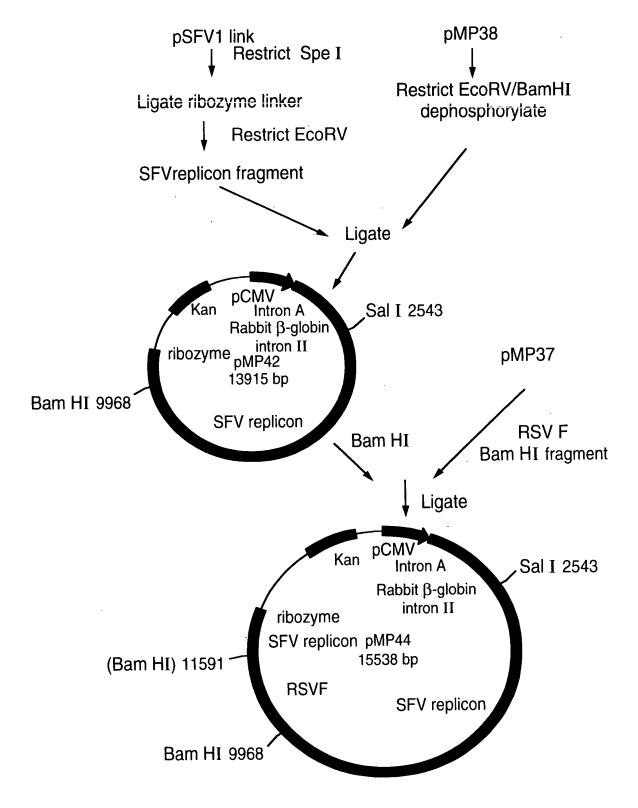


FIG.2B

FIG.3/

Nucleotide sequence of plasmid pMP44

1020 080 140 1200 .380 440 1260 .320 500 960 720 780 840 900 180 240 300 360 420 480 540 009 099 ccatgcctcc acttccctac gaacgcggat ccctttggc ccttatgcta accactcccc caactatctc tattttaca accadatgaa gtgttccgga cgtatgttcc tacggtaaac ttgacgtcaa tttggcagta accccattga gtcgtaacaa atataagcag ttgacctcca tcagcgggtg ctgagagtgc atcagattgg aatcaattac cggtaaatgg ttggctcatg gagacggtc tcaataatga ccaagtctcc ccacgctgtt cggtgcattg tataggcaca accccgctt accattattg ctctttgcca 4 gcagattgta tacatttata gtggagtatt acgccccta accttatggg gtgatgcggt tttccaaaat tgggaggtct acggactctg \mathcal{O} O aaaataccgc tattaatagt acataactta gcagctcccg tcagggcgcg acaacgccgl tctcgggta agccctggt gggcctatac cataacatgg tccacgógaa tccacatccg acggggattt gcgtgtacgg gagacgccat cggccgggaa ctatagactc tgggttattg agagactgac cacatataca cggcatcaga tcataatatg attgactagt cccattgacg tatgccaagt ccagtacatg tattaccatg tcaacgggac gacaagcccg gcgtaaggag gttccgcgtt acgtcaatgg tctgacaca gcgtgggatc ggtttgactc tctgtccttc cggcggagct aagtgtatca ggcattatgc taagtaccgc ttttggcttg attactaatc tttacaaatt ggtgaaaacc gccgggagca cttaactatg ccgcacagat tgtatccata gacattgatt catatatgga acgacccccg cttccattg tagtcatcgc ggcaccaaaa tgggcggtag agatcgcctg ccagcctccg cctataggtg gatactttcc atgccaatac ccatttatta attaaacata cgtggatagc ttgacgcaaa gtgaaccgtc aagagtgacg gctatactgt tatagcttag tctccggtag cggtgatgac gtaagcggat gtgtgaaata ttgcatacgt ccgccatgtt gttcatagcc tgaccgccca ccaataggga gcagtacatc tggcccgcct atctacgtat agtttgtttt cgggaccgat tcggggctgg tattggctat ggatggggtc cgcagttttt catgggctct gacggtaaa catcaatggg ctccgcccca tccccgtgcc taggtgatgg tattggtgac cagcttgtct ttggcgggtg accatatgcg ctattggcca tccaacatta ggggtcatta cccgcctggc catagtaacg tgcccacttg ttggcagtac cgtcaatggg agctcgttta tagaagacac tcttatgcat tagagagtt

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2640 2700 2820 2880 3060 800 2040 2100 2160 2220 2280 2400 2460 2520 2580 160 3000 980 340 940 0 62 68 74(92(12 \sim 2 atataaattc actctgagtc atgccagagc aactggcagc tgcagaccgt ggtaactccc gggtcttttc ttctactctg attgtaagta cttcagcaca tcatcctgcc cgatggacga agaaggcatt cactcatctt actgcgtatg tcacgtgtcg caacatcgct acttaggcac ttttcgctat gaatgggaag agctcctggg acgactcact acgccaaaag gtatgtgtct taaggcagcg tgctgccgcg cgttaaact ttatattgta atatttctgc atcctggtca gaccatgcaa gacaaagaca cacaaatacc tacgcaaaga atcaccgacc catacagacg O tgttctttct tatttgtcag O gacatacacg taaccaccca aagtctttgc tggaggccag tggcggtagg aagagtcaga gtgttgttta ttctttcact aggataaaa atggaagaci cagtactcg gtaactttt ttttccta gaattgtaa gtacatgca tcctttcca cttttgcctg tgacttatta ttttggcaaa cgcgagagat cccattcatc cacaccaaat gcaggagact gatgtctacg gctcgatagc cgcaggaaaa gtgtatgct aacagactgt gacccttgat ataattttgt cacttttgtt tcagggtata ataaggtaga aaacaactac gtttgagatg gcggatgtgt gtattctgat agttttcagg ttcattttct ctcctaacag cacaaggccg gctgacgcag gtagtctgag accatgttca tgtctcatca aattgatcga acccgaaag atagagagat aatctcctac tataccagga ctgacagact gaggggcaa ttattttctt tttttaaatt ttcaaggcaa taattaaatg ttattggtag gatatacact cgtcgacatg acctccgcta aggctgacag cattgcaggt cagctccttg cagtgtgccg ctgagttgtt ggagggcagt gaccctcatg ggctcgcacg tgagtttggg ccaggagaa ccagacgctg ىد ggaaatattc gttattgtgc ttgtcaccgt agctcctgcc gaggtggagt agcgcagaag aaggtgctgg gaagtggccg aacttcaggg \mathcal{O} ttgtaacgaa acaattgtta tggttacaat ccctctgcta gttgatattg ctggctacca agtgcgcctt ggtcgctcgg \mathcal{O} Ø atgcaggcag gacataatag atgttatatg tatcaccatg tcactttttt ccaccacca gtggagatt tgttaacgg ttgtctcct tagggcgaa acggcagcc aaaccgggc ttttgttcc aaagtgcat ccgtcgttc ttttcgcac ggatatcggc cctatgcgc ggcctccggg atggctacg agcacaatgc gaaaatgagc cagaagaag gttgcggtgc cgcgccacca gatcctgag gtaaaattc tgtcccttg ttgacaacca agcttgcat cttctctaa gttttagaga ggctggcgt ttctcttta aacgtgctg gcggctca

FIG.30

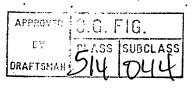
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10200 10260 10500 10560 10620 10680 10740 0880 0920 1100 10380 0800 0 0 1032 1044(1008 1014 098 104 9720 9780 9840 9900 0966 1002 122 ಹ caatgcagga agtattttgt \mathcal{O} tggtcasaac taaatataaa caatcgagcc aaccaatgta tggatctgca gaacaagatc agttagtgtc acctattgtg acaaaagaac gcctataaca aagttactct actatatggt ർ \mathcal{O} gggccgaact ttatacacct atagcgcact aatcctcaaa tcttagtgct tcatagcca ctccgttat cagacccac acgaagaca caaggaaaa tacacctgt caacacaaa tgacatatt aaggggaagt atgccaaaaa aacaattgtt tagagttcca ttagacagca tacaattacc tatgtacaac ggtactgtga tctgcaatgt aaaagtatcc gcaaaggcta taagtaatat aagaattaga cagcagcaaa tgttaggtgt tatcaaatgg caggtgtaac tcaatgatat aatcaaatcg atgtaagcag tgattggatc tggagttgct gtttgcttc b acaggcttgg agaggacctg tgccgtgtt gacaagcag gacagaggat cttggttttt gtagtcagct agtgttaatg ttgtcattaa gttcaaatag gcatatgtag acatcccctc tgtaaagttc \mathcal{O} tcaaaaacag acagaccgcc aacagctgaa gtggttccgg agaggctgc taagaaattg cacagaattc cgagtaacaa gtcacatttt agtgcagtta ttgataaaac caaagcacac acactcaaca ctgcacctag tatatagata gaaactgtga actatagaa ىد gaaataaa cctcaaaaac tagtgaatta ggaagtctta gaaactacac agctgaaaca O gtaagccgct aggttagcaa ggtatgaggt ttaaggcgtt tgcgttaata gaattcggca cctcactgca atcaacatgc cagtgttata taaggtaaaa gttgctcatg tatgaattat aagaagattt atctaaggtc aaacaaggct atcaaatata cagggaattt gtccaacaat aacaagaact attaccaagt aattatgact acagcgtca Ţ taataaaaga acagtttaac Q tagagattac ಹ aaaagttaat acatctgttt tcttcccaca b ttcaagttgg ctaacatcta gcgagggaca cctagattgg ccdcdcdcdc aattttatca gttggtatac gaacagatgc cagaattgca agaaaaggaa gcgttgctgt tactatccac aagtgttaga u cacctgttg atagttttt ctgagtgac ttaccacaa taccaaggt gctgcagca tgttaacta atgattgta gacacaatga tgggggattc taagcgcctg ggaggtggca ggccaccttg ctacggcggt gcaaatgcaa atcactgaag tgagaactg aagtgtaatg aatgctgtaa agaagaac acattaagca tcgccagtg aaaagtgctc ttaaccagca aacaagcaaa aacagactac agcacttaca aatgatcaga atcatgtcca gttatagata gaagggtcca tcagtatctt gcgacgagca ttatagga aaccccaaa

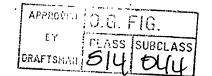
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14040 13740 14100 14160 14220 4280 4340 4400 .3380 3440 3500 .3560 .3620 13680 3800 13860 .3920 3980 460 13200 302 308 326 332 4 gataccaggc ttaccggata gctgtaggta ccccgttca aaacttggtc tatttcqttc aagaaggtgt gggagccacg gctttgccac caaaagttcg gtgttacaac caatttattc acatgtgagg cgctgcgctc ggttatccac aggccaggaa acgagcatca taagacacga atgtaggcgg cagtatttgg cttgatccgg ttacgcgcag ctcagtggaa tcacctagat agccccactc agtacttgga agtgggaaga gcgatctgtc cagaaagtga tgctctgcca tcttagttcc ggccagcaaa ggactataaa tccaacccgg agagcgaggt actagaagaa aagcagcaga gggtctgacg aaaaggatct atatatgagt ctgcctcgtg ttgaactttt ttcaactcag aatgaaactg O O catagctcac gtgcacgaac gttggtagct cacccgctaa agcctccaag aatgcctcca agacacactg ctcactgac gcggtaata acctgccg acctatctca atcatccagc gatctgatcc gtcagcgtaa cggaaaaga gagattatca aatctaaagt gcgctgaggt gttggtgatt tcgagcatca ccataggctc aaacccgaca ggcgctttct gctgggctgt tcgtcttgag caggattagc ctacggctac ttttgtttgc cttttctacg cgcccctggt ccttcaatcc agggagagaa cgcttcctcg tcactcaaag gtgagcaaaa tcctgttccg aaccaaacct gaaaaactca gaatttcttc tcgtgcgctc ccggtaacta ggtggcctaa cagttacctt gcggtggttt atcctttgat gttttaaatc cagtgaggc dadadadada gaatcgccc aggtggacca gtcccgtcaa gagggctccg cggtatcagc tggcgttttt cgggaagcgt ttcgctccaa ccactggtaa accetgteca cagcccacca ttaagtgcag agaggtggcg gaagatgcg1 ttttggtca gaaagaaca gatttgttgt caaagccgcc ർ ggaagctccc ttcttgaagt ctgctgaagc accgctggta tctcaagaag cgttaaggga taaaaatqaa caatgcttaa gcctgactcg taccaggcct gcgttgtcgg tctgtgacac agataggcta agaaatcata gataacgcag gaagaattga cgctcaagtc ttctccctt gtgtaggtcg tgcgccttat ctggcagcag catagctcag ctgcggcgag ttgtgatt cctccctca ർ tgacagttac ggaacggtct gtttcccct ctcagttcg ttatcgcca atctgcgct aaacaaacc gaaaactca atccatagtt tgctgactca gttgatgaga tttattcaa catccccttc ataggacact gaggtatata aattaaagca ccgtaaaaag caaaaatcga cctgtccgcc gcccgaccgc tgctacagag aaaaaagga aattaacca aagtaatgag ggtcgttcgg agaatcaggg cttttaaa

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.5180 14700 5000 5060 5120 5240 5300 5360 5420 14640 14760 14880 4940 480 1482 \mathbf{D} aaaaggacaa aacaatattt gatcgcagtg aagaggcata aacgctacct atagattgtc agcatccatg cataacgttc atttttatct ccccattat tccgactcgt aagtgagaaa ttctttcag aaccaaaccg tatttagaa aggagaaaa cgtctaaga O ctttcgt catataaatc tttaaaaaa catcattggc tatttgaatg tgccacctga tcacgaggcc tctgtaatga ggtctgcgat taaggttatc gcttatgcat gatcgctgtt ccagcgcatc ttttcccggg catacaatcg gaatatggct atgatgatat cactcgcatc tgatggtcgg agcggataca cccgaaaag aataggcgta tggaatgctg tcatctgtaa tegggettee catttatacc gtttcccgtt tttattgttc acaacgtggc aaaagccgtt tcctggtatc tcgtcaaaaa aatggcaaaa cgaaatacgc aggaacactg ataaaatgct tcatcaaaat taatttcccc ttctaatacc tctgaccatc ctctggcgca atcgcgagcc cgagcaagac agcagacagt attttgagac ttgtctcatg aacctataaa atatttttga gatggcaaga attacgctcg ctgagcgaga caaccggcgc aggagtacgg atccggtgag gagaaatt atcagggtta taggggttcc gtgattgcgc caggatattc atgcatcatc tcagaaacaa gcccgacatt atcgcggcct tgtttatgta tcatgacatt tatcaatacc agttccatag tgacgactga caggccagcc gaatcgaatg gccagtttag aacatcagag tacaacctat cttgtattac aataaacaaa tcaccgaggc acttgttcaa ttattcattc gtgagtaacc ttgccatgtt gcacctgatt tgtgcaatgt atatcaggat tcaccatgag ttacaaacag aattccgtca ttggaattta ccaacatcaa tcacctgaa tgaagcatt accattatt



Anti-RSV F titres in sera from mice taken 4 weeks after priming and 2 weeks after boosting

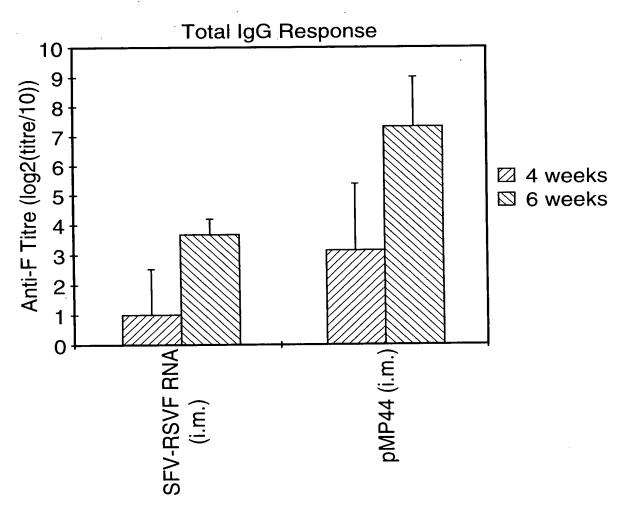


FIG.4

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Ribozyme linker for pMP42

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GCCCAGCCGTACCGTAGAGGTTGAGGAGCGCCAGGCTGGACCCGTAGGCTTCCTCCTGCGTGCAGGTGAGCCTACCGATTCCCTCTTAG

FIG.5

10.6A

ribozyme to ligated fragment RV-Spe SFV Eco

960 1020 140. 200 080 900 480 600 660 720 780 840 420 540 20 180 240 360 aagactcggc atcatgtgaa ggtagggtac tgtcaaagga tcaaatgact gaactatctg agaccttgat gtgggcattt agtgaaggtg cgcaatccca aatacctgtt ggaggccgag gggagtcgtc aacacctcgc cgtagttctg ggcagcggcc gaccgtcatg atcgctgtac caccccgttt cgacgagcag gttctcggta acctccgta cgtatgccct gtgtcgtacg gggattgaa ccatctgtga cggcggagac gggtcgtgga taggaaatta aatacaaggc cccagacaat ctacaggcct agcgagagtt aggagaggtt ggtttgacac gctggcactt ataccatcgt acggtaaaac ccacagacac agttgttagt acacgatgaa gctgctgctt aataccactg ccgacctgca cagacgtcac atgcaccaac caaactgggc tgactgaggg acacagtca. caaagaaac caagaggaga cccatcgcgc gcaggtgcag gtgtgcaaga gacgcacaga cgaaacacta tgggcgaggg tcacttactt aaaccagaca agcctatggt aagaagacca gcagcatcct aaaccttgcg ctactgagga tgtaggtgcg cccggcctgt gtcccctcaa ggaaaaatca tgcctgcata tatgctgtac tattggattg acctacgcca tctacgcaca gatagctacg gacgtacta accctcgtc acagccgaac gcttttggcc ggatgctgaa O cgaaaggctc agagatcgca tcctaccttt cgcgtatcca gaagcaattg gagcagaaag atcctttacc cactatgtgc gggattccta atgcacctac aagaacacag atttagcaag ccgagagagg catgtacaag cgtcatcccg gagaatgatg ccaggacgtg cagaacggcg aggactgtgt cacaccggag agagtatca ttaactcgtt aagccttacc atcacgcgga tggccgtcgc ctctgggtgt agatgcacac gcattaagat cgtcagccag ttgaagaact aagtcaccgc cgccttccag cagaagaccc tgctggatag acgctgaatc tggccgtata tgtacactga aaggtaaaca ttaagaaat cattccctgt cgaccgacgt ttgtgaacgg tgaaaggtgt cgctagcagg ccaggaacat ttctccgcaa gtcagatcac ctcgacgcgt agcgcgttga gggtacgtag gccgtgacgt aaagagtct ggcatactag cagaggatag cttccgattg atgaaaaac aaaacgagga ccttcagagt ctgactagag gacgtcgacg atcggcagtg tgcgcagcg ctacgccag atcaggcga tgtttgacg gtgttacagg ggatctacat tccacctga ccgggaagg cagccgaag aactgtcca

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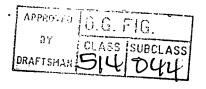
2700 2760 2220 2280 2340 2400 2460 2520 2580 2640 2820 2880 2940 3000 090 2100 2160 1740 1800 1860 2040 920 980 989 cggattcttc gtactatgga cgagaacaac cctaattgct gcactacgga cacaggacag cctcacccgc cctgcgtcg aacgctggcc ggccacattg ggctgcgcct gcctgtcctg agcatttaag tgccgtggac atgtcataaa aaagcagctg ccatattgcc agctgaaaga cgcctacgaa ctttggggtt tctggtcacc ccgcgggaag agcagagcag atatgacggc tttgagcgag agaggaagcg ctctgctggc ccaagcaatg gcactgaagt tgtctacgtt tcatagacac ccttgtatgc O ttgaaggacc aaagcctggt ccataattac tttgcaccaa ർ tagtaggagt tgaagaagca ggtgtcgtcg catctcaggg tggtgtggaa tccatgaatt ccaaacacga aggtcgacgg ggaaactata agaaagtcag gcgtcaagag tgcaccctct agtttcaagc ccctgtatt gaggctggg gtaacttta gagtggagca acatgcttcc aatgaaaatc gaggataggc attccacagg atgaaggtga tgttgggcga ttgaatgaaa cgaaggtgt cacaacatct aaacccataa aacccccgt agcctcgtga gttaacgacg tgcggagacc acagcagcag ttggcccccg ggcggttacc ttcgtcaaca gagaactacg aaaaatgct aagactacag ctgctaaacg cattccggta acggccatcg aaggtaaat gttttctgcc catcgtgtta gcagaaggtg gacgcgcact cctatcaaac cgacaaaata agcgaacgtg gacagcagag agtggtggcc ggcaccatat agtggtgtta gaacttcaac gcgtccagtc cccgtgcaac cgaagtcatg cgggagggcc cgaaagggag caccgacgag cgacgtagat agagctaacc tattattaag ccaggaaata tgactccatc tttcgcttgc gagctccaag atcggccat accgtggaca acgccgtaag aagaagaaca tccagaacaa gaatcagatt cttactctcc acagtggcct tggacgaggc ctcggagcaa agcttaaggt gacgttgcac gcacgaccaa agccaggaga atgtactgct ggattaaggt \mathcal{O} gcaagtctgc aggagaactg gggaaaacag ccgtgctcaa ಹ \mathcal{Q} tggtgtacaa cgtcgctgaa tgttggtggg taacacata taccatgtg agtacgtgt tcaggccgt agtatatcca cagttggact gagcacgtga gtggacgcgt acactgccg aggacagag gttgacctgg gggacaagta ttgttaaac aatatgatgc ggcaagatgc ccaagccca aaggggtat ggcgatccct aagaatggc tccccgcaga gtgaaaataa agggtcctac agcgccacta gttcacggac tegggtttgg gggctgaaga ccgggatcag agcggcaaga atcctatatg actgacgccg b

FIG. 60

4440 4560 4140 4200 4260 4320 4380 4500 3300 3360 3420 3480 3540 3600 3660 3720 3780 3840 3900 3960 4020 4080 0 324(62 ccatctattc cgctgtctac tgatgacgtg tcgtaagggc tccggtgaac cgcaatgaca gaacattcac gttctccaac taagagagca tggaactgta gggagcagca ccacgctgta ccgctgctg aagttgggag caaccaggct aaacgaacag tgagtggctg ggctttgcct gtgctacgac gctgcagatg agcttacgga ctcgtctgca agctgccagg caaccgcagg gagtgccgtg ggcagttat cagcctttaa gcgaattggc ¥ agttgctcaa gatccaaatg ಹ agtacaacct tggtctttgt acgccatgaa gcagaaagtt ataccaagct cctacagagt ctaacgcccg aatccctcaa gcagagacaa gcctggtggg tgcaagaggc tgtgccgcta atgccgcaac gcgccgatag tcttgatgag tgttcttgct accccgtca gcgtagcca gtacgaaat taattccta gcagtaggg cgggcaagc caccagatga tcactgagca accatctact tactttgaag tggcccagac gacaacatca gtgccctgcc aggttcgact tgtgtcgacc tcctccttaa tgtgcaccat aaatggccgt gaaggggacc aggctgcagc acggctgtgg ccggacagca cagtggcata acggttaaag aatgtcacag cccggcggca aatacagaag gttaacgcag tgaggatagt tatggattca ctggacaatg ctggtgagtg gctgtactcg actgacgttg cgaaacaatg tcccaggaca agccgttgtt tgtcaccagc ctctacgcta aacagtcatg gactgaagcg aaacagactg cggaagagat cgctgacgtg tgacatgagg gagagtgcac ctaccagcag actgctaaaa cacggccggg agcggctgtg cgtggcgaag tggaaggatg cctgaagggg gctttctgtg tgagtacaag ccacgtcctg gtcaccgctg tgacgccgg aaatcagcga tctctgccac acgccacgga aggaagccat cagacttggt ctgacgggtc tggcagagat acgcgctggg catcaacacc gcccggattg gaaagagacc aagccatgca cgtgcacaga tatgcagggc gcacaattaa ccgccgaagt acagacctgg aaatccaacc ccctggtggc taagagggta tcacttggtt gactgccggc gaatccacca atgcgctacg tgttcagcgg gacatacct atatgcctat acgccgata acatagcca aagaaaatcc gagctgacca acagtacca ctattgata attccgatt acggaattca gagtgttgc gggatggcg caccagtgg gggcagtgg ccacaggag acagcaatgg cactgggata ctggaagcta gcagaaagaa ctgccgcacg gtcaataaag cgacgcaggg ctaagtttag cttgggggag ttgacaacg atgccggag gcgcctaatt

10.0 10.0 10.0

6180 4800 4860 4920 4980 5040 5100 5160 5220 5280 5340 5400 5460 5520 5580 5640 5700 5760 5820 5880 5940 0009 0909 474 cagattgtac cccgtgtac cagtgccgtc gagaaactgc cgtggagtgc acctatccgg agctgctgcc cagattcacg gaaggttctc ctcgatctac gatgaatttg tactttcgga ctcggacact cgcacaactg ggagaagctg ccagtctcgc gtgcaacgaa atacgacgca ctgcccggcg ctcgtcttcc aggcatcgcg gaacccgatt gcgaccggtg ttgctcatct atctacgacg ggaaagacc ൻ atgctaaaca aaggcccgaa ttcccatgga ttaggaacaa atatttctc atctccagtg atactgagag ൯ catcggggggc ggtaccccg caatcgcagc taacagatga cgactgtacg ಹ cagtgttcaa taaagtgcga agtatgccgc ggaccaccga gtgacatcga tggacctcga gcgcggcgga gcatggtggt ccgccacca aacacacag ctgaacccg cctccggga agagtcgat gagcgacat cagggacga ccaaattga ctgcaggagg ccaaaattgg gaggctaata tacgcggttc tcgtaccaga tgcttggaca taccaccagc gtgctagcgg atggactcgg tgggaagaat gacgtacacc aggactgcgt gatgcgttgg gcgggtgcat aggcagcaca gacaggctca cccgatgtag agtccgcgga gacttggact gcagaccatg cttgcctccc caagttaaaa gtgcagaagg ttgcagtcg1 gtcggatagt actacagaac tacctatgtg cttggttccg aaaatccgtt cataccaaca attctcaagc aacagtggcg acatcatgcg actacccacc taggtcacac acgagggttt gctacccagt ccctgaaccc agctgcatac gcctgcccca gcacgaggtc actaggccgc aatgtacccg gcacccatcg cacggtggtg tgtagatggg ttcagtggtt caaagtcac agtgacggc cggagaata agaacatcac actttgacga tggttgacgg ttcagaacac aaatgcgaga atgcctgctc agacccacaa ctcccatagt cagatgtgca gaaagccgac atttacaaca aggaggagaa aaatgcagat acatgaaagc acgtaggccg tgatcgaaag gaaattaccc gctacccgaa tagacagaat atcggtcgtt ataccatgtc gcccgaagag acgtcctgcg cgaaatacca cgacggtacc aacgagatg ttgctgctga acttggaca aagctccggt acgtcacgc tcaagcgct taaccactg gtcgacatga ttacactac ggcagcggac gatgcggtcc aagtggaga tcccctaccg acctatcca ccgtcaccct tgttcgcta gcagaacgga ctgttcgacc gaccactcag actgccagcg gagccaatgg gacctggcgg cctccaccgc ccggcgccga acgttcggcg gacttcgacg acgggagcgg



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